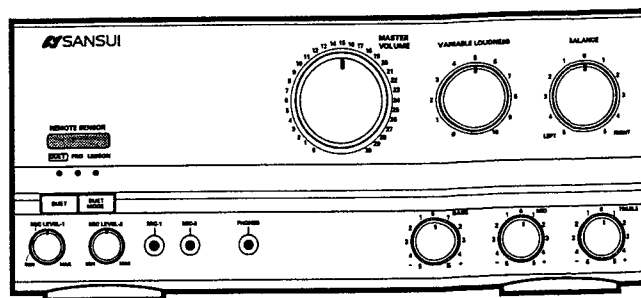




# SERVICE MANUAL

## A-X750

MINI COMPONENT SYSTEM  
<Amplifier>



### Organization of System Component

System Name	Amplifier	Tuner	CD Player	Cassette Deck	Optional Speaker
MC-X750/X750L	A-X750	T-X950/X950L	CD-X950	D-X950	S-X750

### CAUTION

- Parts identified by the  $\Delta$  symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
- Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

### NOTICE

- Some printed circuit boards are not supplied assembled. To separate these in this service manual, the stock numbers are not indicated for these boards. However, stock numbers for individual parts are indicated.
- The symbols EU, EG, IPT, SS and XX <EXPORT> on the parts list and the schematic diagram mean followings respectively.  
EU ..... Manufactured for European market.  
EG ..... Manufactured for F.R. Germany market.  
IPT ..... Manufactured for Italy market.  
SS ..... Manufactured for Saudi Arabian market.  
XX ..... Standard Version.  
<EXPORT>  
NON MARK ..... Common Parts.
- Since some capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors and resistors, which was issued on June 1987.
- Abbreviations in this Parts List are as follows.

### Abbreviations List

C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
Ce.R.	: Cement Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metalized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable Resistor	M.M.C.	: Metalized Mylar Capacitor
A.R.	: Array Resistor	A.C.	: Array Capacitor
C.C.	: Ceramic Capacitor	V.R.	: Variable Resistor
C.T.	: Ceramic Capacitor, Temperature Compensation	S.V.R.	: Semi Variable AF Resistor
E.C.	: Electrolytic Capacitor	SW.	: Switch
E.L.C.	: Low Leak Electrolytic Capacitor	Chip R.	: Chip Resistor
E.B.	: Bi-Polar Electrolytic Capacitor	Chip C.	: Chip Capacitor

## Specifications

### Power output (Front channel)

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.7% total harmonic distortion. 40 watts per channel into 6 ohms.

Load impedance ..... 6-16 ohms

### Frequency response (at 1 watt)

BS, LD, VCR ..... 10 to 50,000 Hz, +1 dB, -3 dB  
BASS PREOUT ..... 10 to 200 Hz, +1 dB, -3 dB

### Signal to noise ratio (short-circuit, A-network)

BS, LD, VCR ..... 90 dB

### TONE CONTROL

BASS .....  $\pm 8$  dB (63Hz)  
MID .....  $\pm 8$  dB (1 kHz)  
TREBLE .....  $\pm 8$  dB (6.3 kHz)

Dimensions ..... 270 mm (10-11/16") W

115 mm (4-9/16") H

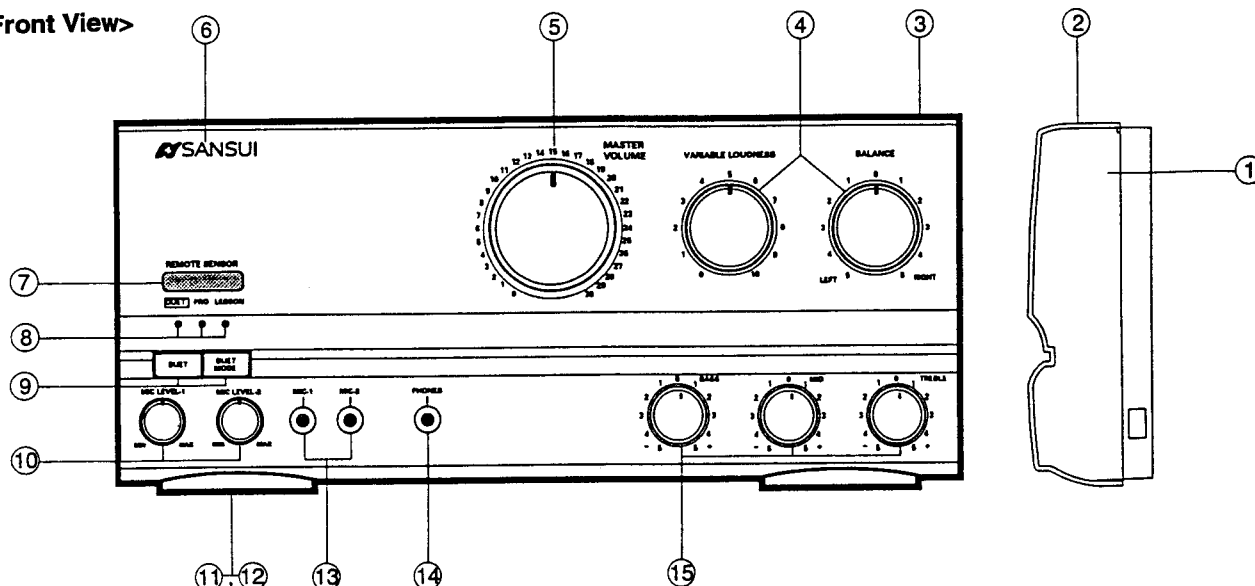
340 mm (13-7/16") D

Weight ..... 5.6 kg (12.4 lbs) net

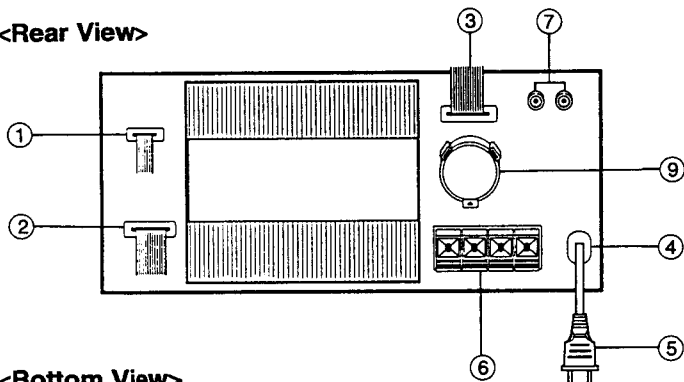
\* Design and specifications subject to changes without notice for improvements.

# 1. OTHER PARTS

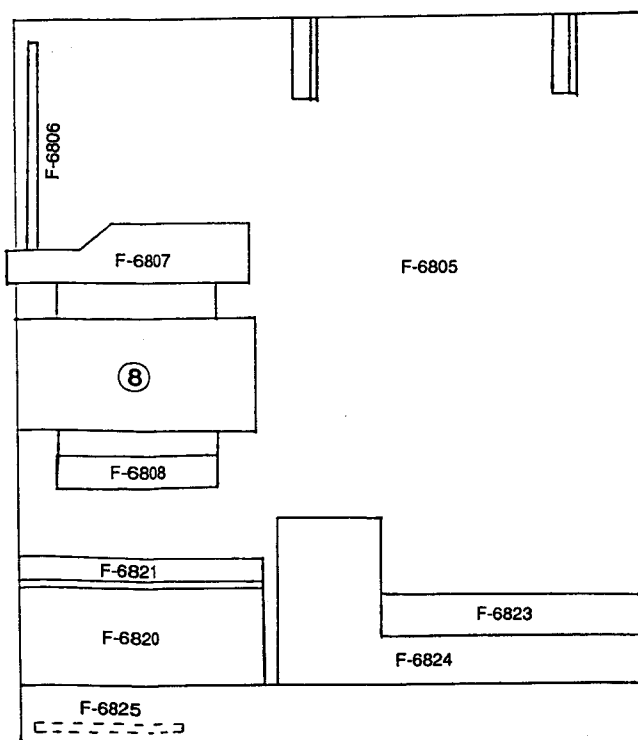
<Front View>



<Rear View>



<Bottom View>



Parts List(Front View)

Parts No.	Stock No.	Description
1	05111100	Front Panel,(GOLD)
1	05111200	Front Panel,(BLACK)
2	05160100	Front Panel,Aluminum(GOLD)
2	05157000	Front Panel,Aluminum(BLACK)
3	05100700	Bonnet(GOLD)
3	05091000	Bonnet(BLACK)
4	05111500	Knob,LOUDNESS/BALANCE(GOLD)
4	05111600	Knob,LOUDNESS/BALANCE(BLACK)
5	05128100	Master VR,Knob Assy(GOLD)
5	05128200	Master VR,Knob Assy(BLACK)
6	05095600	Logo Badge
7	05091500	RS Filter
8	05101600	DI Indicator
9	05157200	2P Knob,DUET(GOLD)
9	05153600	2P Knob,DUET(BLACK)
10	05098300	Knob,MIC Level 1/2(GOLD)
10	05097810	Knob,MIC Level 1/2(BLACK)
11	05149900	Leg
12	27902510	Leg Sheet
13	49600500	MIC 1,2 Jack
14	49600600	PHONES Jack
15	05111700	Knob,BASS/TREBLE/MID(GOLD)
15	05111800	Knob,BASS/TREBLE/MID(BLACK)

Parts List(Rear View & Bottom View)

Parts No.	Stock No.	Description
1	49738410	15P FG Plug Cable(1)
2	49738500	13P FG Plug Cable(2)
3	49738600	7P FG Plug Cable(3)
4	49374300	Strain Relief
Δ 5	48837700	Power Supply Cord<SS,XX>
Δ 5	49299300	Power Supply Cord<EU,IPT,EG>
6	46549200	4P Speaker Terminal
7	49622900	2P Surround Output Terminal
Δ 8	15041609	Power Transformer<SS,XX>
Δ 8	15041605	Power Transformer<EU,IPT,EG>
Δ 9	48175200	Voltage Selector Plug<SS,XX>

### 3. INTERIOR BLOCK DIAGRAM & TERMINAL FUNCTION OF IC

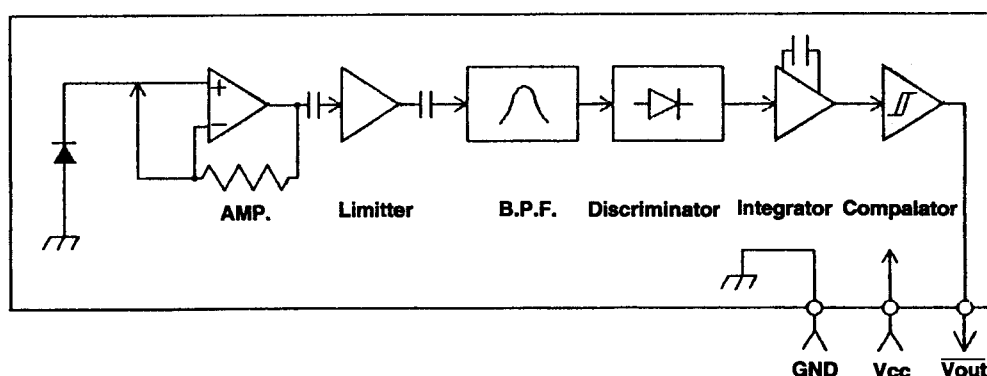
#### •M38173M6-FP <System Control>

##### Terminal Function

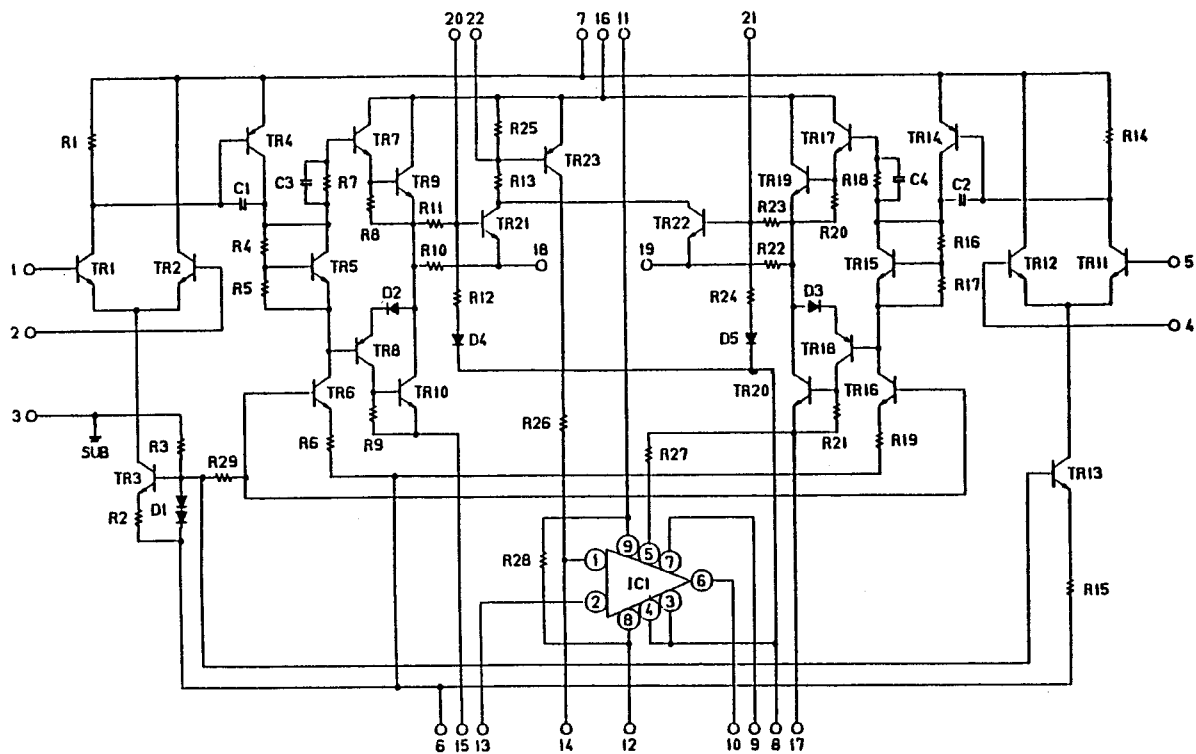
PIN No.	I/O	Function	Active
1	I	A/D SW-1	
2	I	A/D SW-2	
3	I	A/D SW-3	
4	I	A/D SW-4	
6	O	Serial Clock Output	
7	O	Serial Data Output	
10	O	Serial Clock Output for on Screen	
11	O	Serial Data Output for on Screen	
13	I	NTSC/PAL	
14	I	Parity Input for on Screen	
15	I	Short Detector	L
16	I	Tuner Mute	
17	O	Voice Cancel Output 1	See Block Diagram on Page 1
18	O	Voice Cancel Output 2	
19	O	Voice Cancel Output 3	
20	O	Voice Cancel Output 4	
21	I	JOG Direction Detector Input	
23	I	JOG Intercept Input	
24	I	Received Signal from Remote Controller	
25	I	Hold Input	L
26	I	Sansui Serial Bus Input	
27		RESET	
30		OSC Terminal 4.19 MHz	
31		OSC Terminal 4.19 MHz	
32		0 V (GND)	
33	O	RESET Output	L
34	O	FL Micro Computer Chip Select	L
35	O	M6604 Chip Select	L
36	O	M50554 CS	L

PIN No.	I/O	Function	Active
37	O	YSS215 Working Clock	L
38	O	LV3100 Chip Enable	
39	O	LC7536#0 Chip Enable	
40	O	LC7536#1 Chip Enable	
41	O	TC9162 Serial Clock	
42	O	TC9162 Serial Data	
43	O	TC9162#0 Strobe	
44	O		
45	O	FAN A	
46	O	FAN B	
47	O		
49	O	Power Out	L
50	O	Signal Mute	L
51	O	Sansui Serial Bus	
53	O	Flat Output	H
54	O	Center Mute	L
55	O	Rear Mute	L
61	O	LB1641 Motor Driver (UP Mode)	H
62	O	LB1641 Motor Driver (DOWN Mode)	H
69	O	Mute LED	H
70	O	Stand by LED	H
71	O	Effect REC LED	H
73		5 V	
74		0 V	
75		0 V (GND)	
76		5 V	
78	I	Defector of Volume Position	
79	I	Check Input of Back up Voltage	
80	I	Thermal Detection	

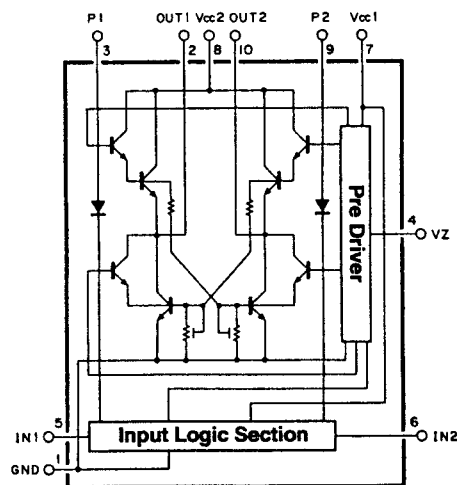
#### •GP1U561 <Remote Controller Receiver>



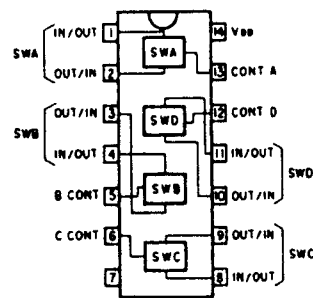
•STK4164-2 <Power Amp.>



•LB1641 <Driving Motor>



•LC4966 <Analog Switch>



## 4. PARTS LIST OF CIRCUIT BOARD

### 4-1. F-6805 MAIN BOARD

(STOCK NO.01324904-XX,SS,EU,IPT/01325008-EG)

PARTS NO.	STOCK NO.	DESCRIPTION
* TRANSISTOR		
KQ1	46719900	DTC124ES
KQ2	46719800	DTA124ES
KQ3	46604301	2SC3327
KQ4	46367201	2SA1048
KQ5	46367201	2SA1048
KQ6	46719900	DTC124ES
KQ7	46719900	DTC124ES
KQ8	46719800	DTA124ES
KQ9	46719900	DTC124ES
* IC		
KIC1	48056800	LC4966
KIC2	49263900	NJM20680
KIC3	03007700	NJM45580
△ KIC4	49722700	STK4164-2
* DIODE		
KD1	46464100	1SS133
KD3	46464100	1SS133
△ KR16	49752500	100 OHM 1/5W N.I.R.
△ KR18	49752500	100 OHM 1/5W N.I.R.
KR101	49757100	100 OHM 1/2W N.I.R.<EG>
KC4	48663200	330PF 50V C.C.
KC5	48660200	47PF 50V C.C.
KC9	48663200	330PF 50V C.C.
KC10	48660200	47PF 50V C.C.
KC102	48662600	100PF 50V C.C.<EG>
* TRANSISTOR		
LQ1	46367201	2SA1048
LQ2	46719900	DTC124ES
* DIODE		
LD1	46464100	1SS133
LD2	46464100	1SS133
LD3	46464100	1SS133
△ LRL1	49587400	RELAY 2M DC2402-05
OR 49730300		RELAY
* TRANSISTOR		
△ HQ1	46614001	2SA1283
* IC		
△ HIC1	49440800	NJM78M12FA
△ HIC2	49435600	NJM79M12FA
△ HIC3	49440800	NJM78M12FA
△ HIC4	49440500	NJM78M06FA
* DIODE		
HD1	49634100	DBF60E
HD3	46273600	DBB10B
* ZENER DIODE		
△ HDZ1	49516400	MTZJ27B
△ HDZ2	49676600	MTZJ5.6C
△ HR1	46623500	22 OHM 2W N.I.R.
△ HR5	49751300	10 OHM 1/5W N.I.R.

### <F-6805>

PARTS NO.	STOCK NO.	DESCRIPTION
MR6,7	46248600	27 OHM 1W N.I.R.
MC1	08680400	0.01 UF 500V C.C.
MC3	08680400	0.01 UF 500V C.C.
MC4	49114600	6800UF 50V EL.C.
MC5	49114600	6800UF 50V EL.C.
MC9	49723400	2200UF 25V EL.C.
MC10	49632400	1000UF 25V EL.C.
OZ1	46549200	SPEAKER TERMINAL 4P
* TRANSISTOR		
VQ2	46367301	2SC2458
VQ3	46367301	2SC2458
* IC		
VIC1	49723900	MC8173M6-131FP
VX01	49777100	QUARTZ ELEMENT KBR-4.19MKS
* DIODE		
VD3	46464100	1SS133
VD4	46464100	1SS133
VD5	46464100	1SS133
VD6	46464100	1SS133
VD7	46464100	1SS133
VD8	46464100	1SS133
VC1	48666200	0.01UF 16V C.C.
VC2	48666200	0.01UF 16V C.C.
VC3	48785900	3.3UF 5.5V EL.C.
VC10	48662600	100PF 50V C.C.

### 4-2. F-6806 AC FUSE BOARD

PARTS NO.	STOCK NO.	DESCRIPTION
△ KR51	49772400	5.6 OHM 10W CE.R.
△ KR52	49772400	5.6 OHM 10W CE.R.
KR131	49757100	10 OHM 1/2W N.I.R.<EG>
KC132	48662600	100PF 50V C.C.<EG>
OZ2	49622900	TERMINAL BOARD 2P
△ PF1	49593600	FUSE 2A<SS,XX>
△ PF1	49297200	FUSE 2A<EU,IPT,EG>
△ PF2	49593600	FUSE 2A<SS,XX>

### 4-3. F-6820 MIC AMP. BOARD

(STOCK NO.01325304)

PARTS NO.	STOCK NO.	DESCRIPTION
* TRANSISTOR		
QO1	46367101	2SC2603
OR 48058801		2SC1740S
QO6	46719800	DTA124ES
OR 49390400		RN2203
* IC		
GIC1	49439500	NJM4558L
OR 49541200		MS218AL
GIC2	49439500	NJM4558L
OR 49541200		MS218AL
* DIODE		
GD1	46464100	1SS133

--To be continued--

## &lt;F-6820&gt;

PARTS NO.	STOCK NO.	DESCRIPTION
GC1	48662800	150PF 50VC.C.
GC33	49417000	0.1UF 50V C.C.
GC34	49417000	0.1UF 50V C.C.
GVR1	49731300	20K OHM V.R.,MIC LEVEL
KR22	46248100	10 OHM 1W N.I.R.
Δ KR23	46624700	220 OHM 2W N.I.R.
OJ1	49600500	MIC JACK 1
OJ2	49600500	MIC JACK 2
OJ3	49600600	PHONE JACK

## 4-4. F-6821 KARAOKE FUNCTION BOARD (STOCK NO.01325404)

PARTS NO.	STOCK NO.	DESCRIPTION
* TRANSISTOR		
Q2	46367001	2SA1115
	OR 48058601	2SA933S
Q3	48217800	DTC114ES
	OR 49388100	RN1202
Q4	48217800	DTC114ES
	OR 49388100	RN1202
Q5	48217800	DTC114ES
	OR 49388100	RN1202
* FET		
GFT1	46643500	2SK163-K1
	OR 46643501	2SK163-K2
	OR 46643502	2SK163-L1
	OR 46643503	2SK163-L2
	OR 46643504	2SK163-M1
	OR 46643505	2SK163-M2
	OR 46643506	2SK163-N1
	OR 46643507	2SK163-N2
	OR 46643700	2SK246-Y
	OR 46643701	2SK246-CR
	OR 46643702	2SK246-BL
GFT2	46643500	2SK163-K1
	OR 46643501	2SK163-K2
	OR 46643502	2SK163-L1
	OR 46643503	2SK163-L2
	OR 46643504	2SK163-M1
	OR 46643505	2SK163-M2
	OR 46643506	2SK163-N1
	OR 46643507	2SK163-N2
	OR 46643700	2SK246-Y
	OR 46643701	2SK246-CR
	OR 46643702	2SK246-BL
* IC		
GIC3	49439500	NJM4558L
	OR 49541200	MS218AL
GIC4	49439500	NJM4558L
	OR 49541200	MS218AL
GIC5	49439500	NJM4558L
	OR 49541200	MS218AL
GIC6	49439500	NJM4558L
	OR 49541200	MS218AL
GIC7	49439500	NJM4558L
	OR 49541200	MS218AL
GIC8	49439500	NJM4558L
	OR 49541200	MS218AL

## &lt;F-6821&gt;

PARTS NO.	STOCK NO.	DESCRIPTION
* DIODE		
GD2	46464100	1SS133
GD3	46464100	1SS133
GD4	46464100	1SS133
GD5	46464100	1SS133
* ZENER DIODE		
GDZ1	49676500	MTZJ5.6B
GDZ2	49675800	MTZJ4.7A
	OR 49675900	MTZJ4.7B
	OR 49676000	MTZJ4.7C
GC27	48508400	10uF 16V Ta.c.
GC32	48103200	0.47UF 50V E.B.

## 4-5. F-6823 TONE CONTROL BOARD (STOCK NO.01325604)

PARTS NO.	STOCK NO.	DESCRIPTION
* IC		
JIC301	49439500	NJM4558L
	OR 49541200	MS218AL
JC324	48658600	10PF 50V C.C.
JVR303	49742800	100KB OHM V.R.,TREBLE
JVR304	49742800	100KB OHM V.R.,MID
JVR305	49742800	100KB OHM V.R.,BASS

## 4-6. F-6824 MASTER VOLUME BOARD (STOCK NO.01325704)

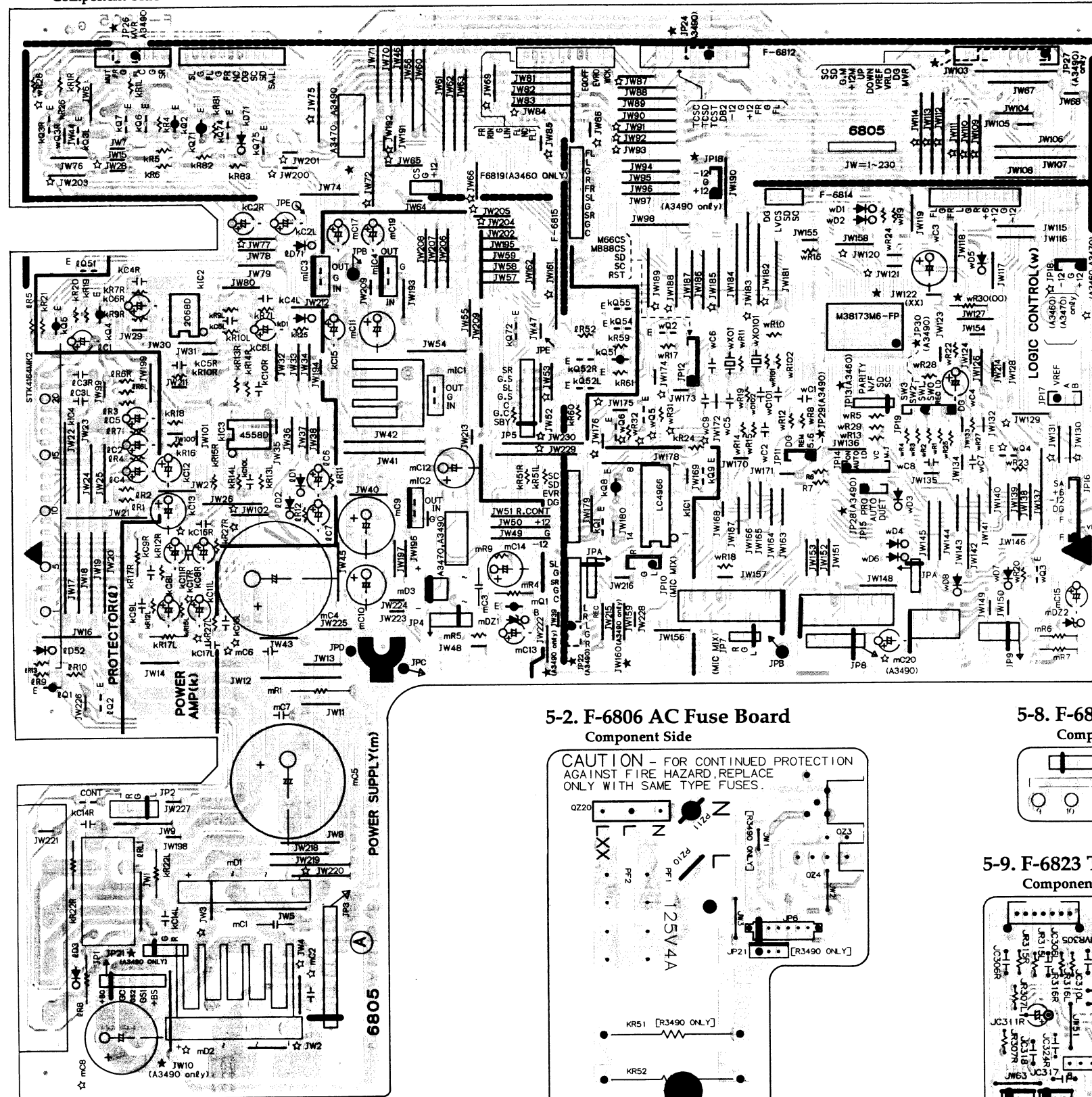
PARTS NO.	STOCK NO.	DESCRIPTION
* IC		
JIC300	49439500	NJM4558L
	OR 49541200	MS218AL
JIC302	48982600	LB1641
* ZENER DIODE		
JDZ300	49675800	MTZJ4.7A
JVR300	49742700	150KB OHM V.R.,LOUDNESS
JVR301	49740500	100KB OHM V.R.,MASTER
JVR302	49742900	250KW OHM V.R.,BALANCE

## 4-7. F-6825 KARAOKE SWITCHING BOARD (STOCK NO.01325804)

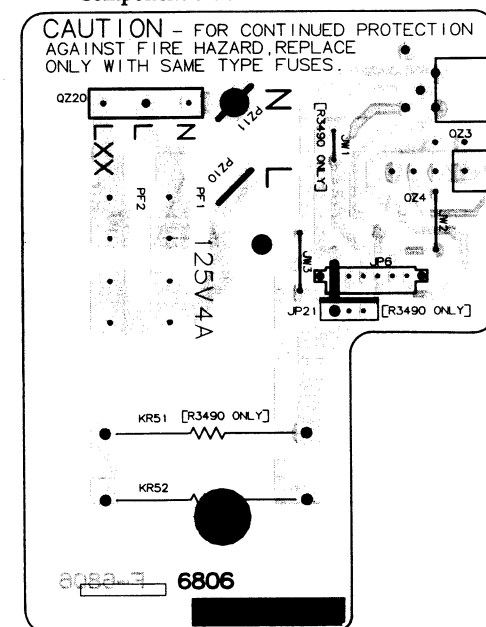
PARTS NO.	STOCK NO.	DESCRIPTION
* IC		
NIC300	49736300	GP1U561
* TRANSISTOR		
NQ300	48217800	DTC114ES
	OR 49388100	RN1202
NQ301	48217800	DTC114ES
	OR 49388100	RN1202
NQ302	48217800	DTC114ES
	OR 49388100	RN1202
* LED		
NLD300	48841100	SEL3210,DUET ON
NLD301	48841200	SEL3910A,PRO
NLD302	48841200	SEL3910A,PRO
OS300	49326300	TACT SV.,DUET ON/OFF
OS301	49326300	TACT SV.,DUET MODE

## 5. PARTS LOCATION ON CIRCUIT BOARD

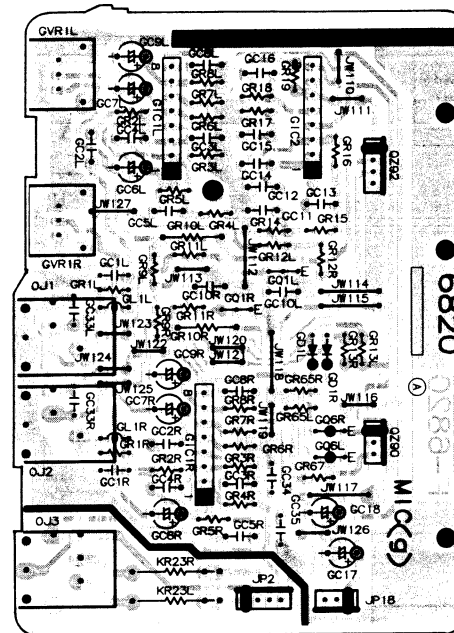
5-1. F-6805 Main Board  
Component Side



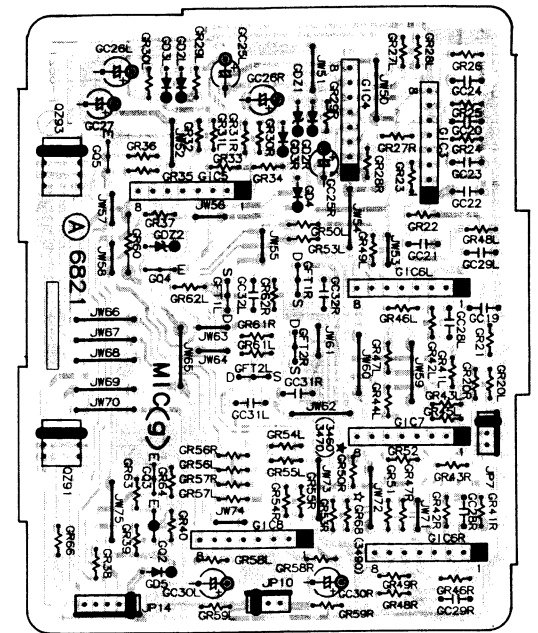
5-2. F-6806 AC Fuse Board  
Component Side



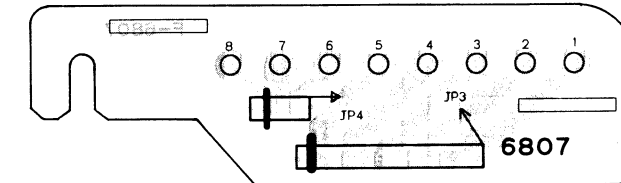
5-3. F-6820 MIC Amp. Board  
Component Side



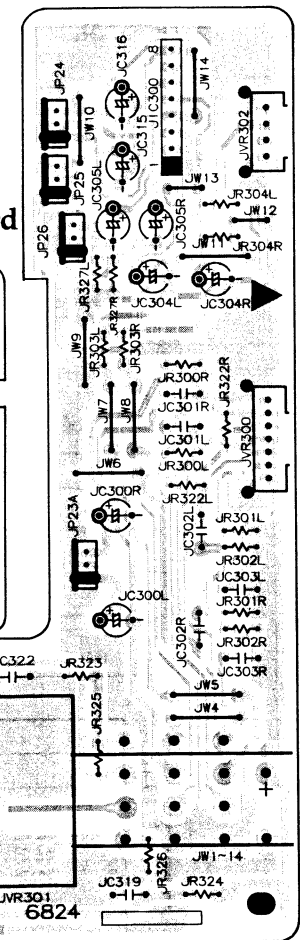
5-4. F-6821 KARAOKE Function Board  
Component Side



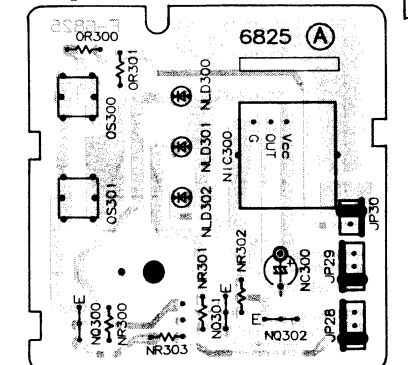
5-5. F-6807 Relay Board A  
Component Side



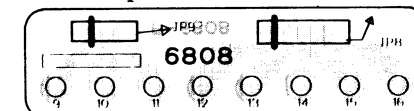
5-6. F-6824 Master VR. Board  
Component Side



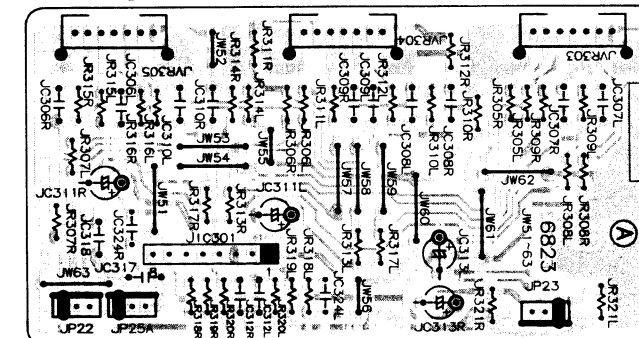
5-7. F-6825 KARAOKE Changing Switch Board  
Component Side



5-8. F-6808 Relay Board B  
Component Side



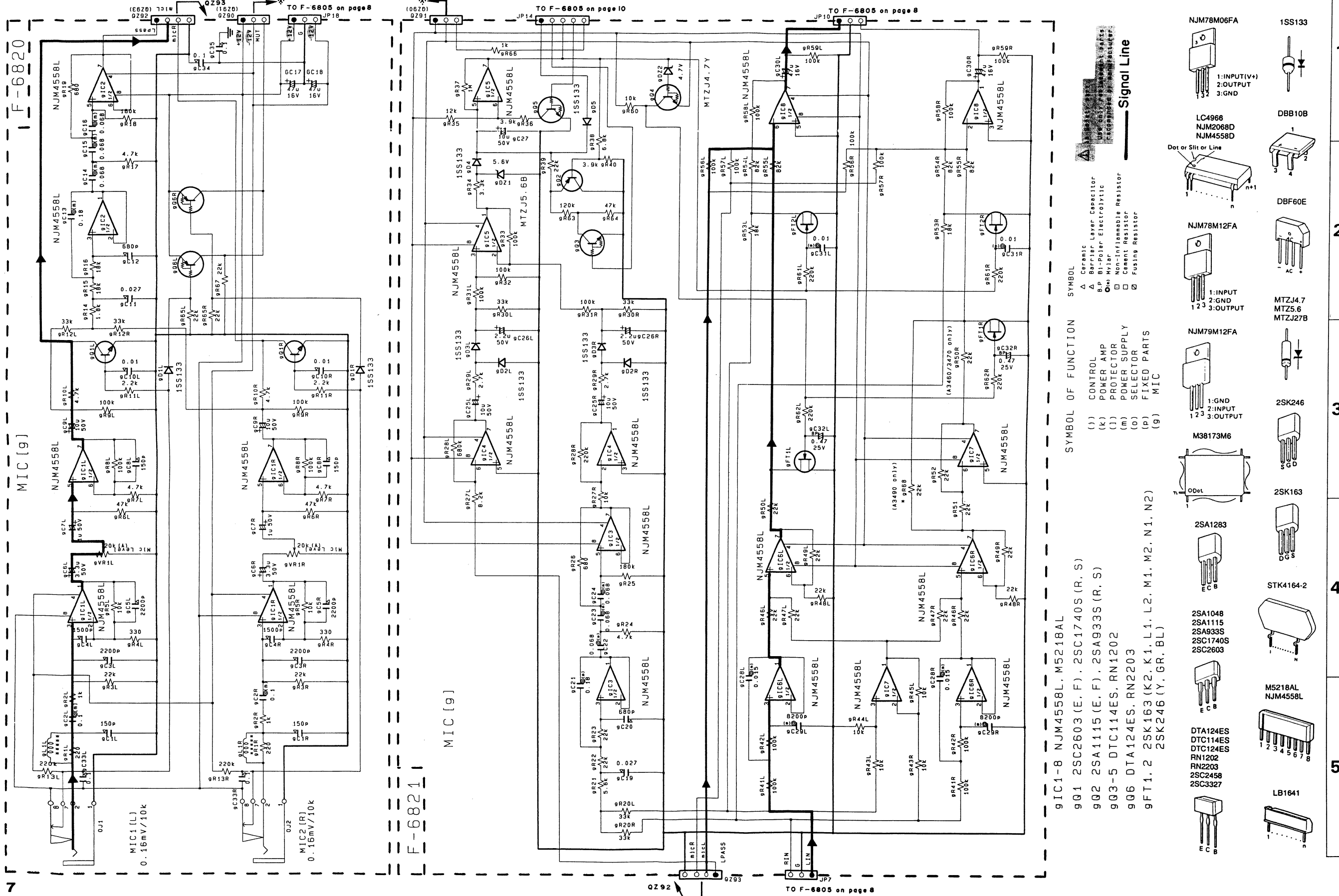
5-9. F-6823 Tone Control Board  
Component Side



## 6. SCHEMATIC DIAGRAM

## 6-1. MIC Amp. &amp; KARAOKE Circuit Section

• Design and specifications subject to change without notice for improvement.  
 • La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
 • Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



F-6820

MIC [g]

7

F-6821

MIC [g]

Q292

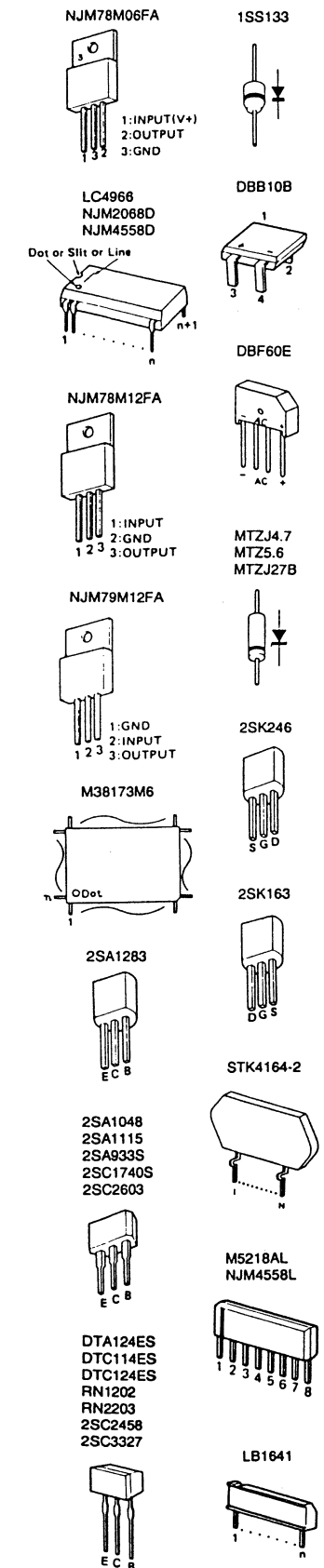
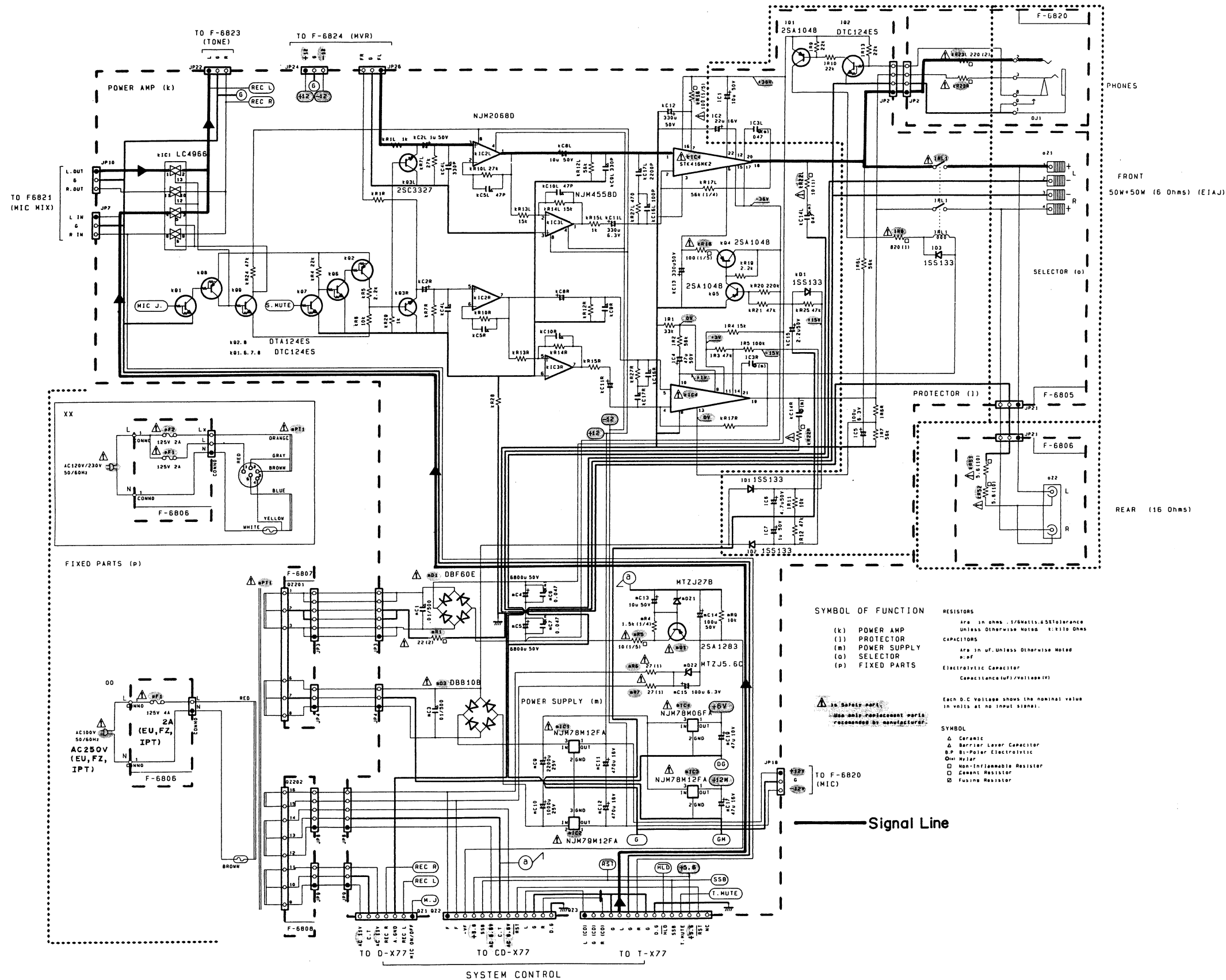
Q293

TO F-6805 on page 8

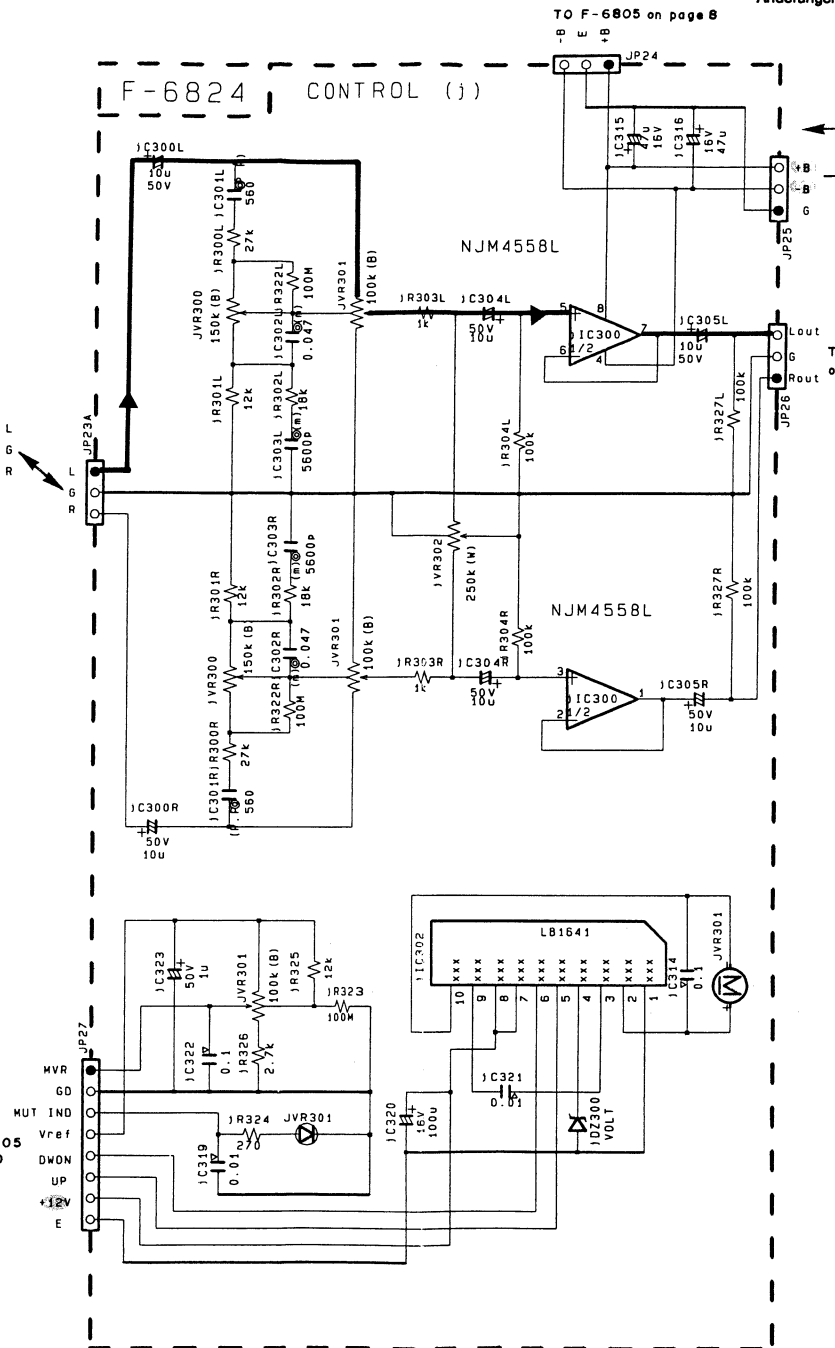
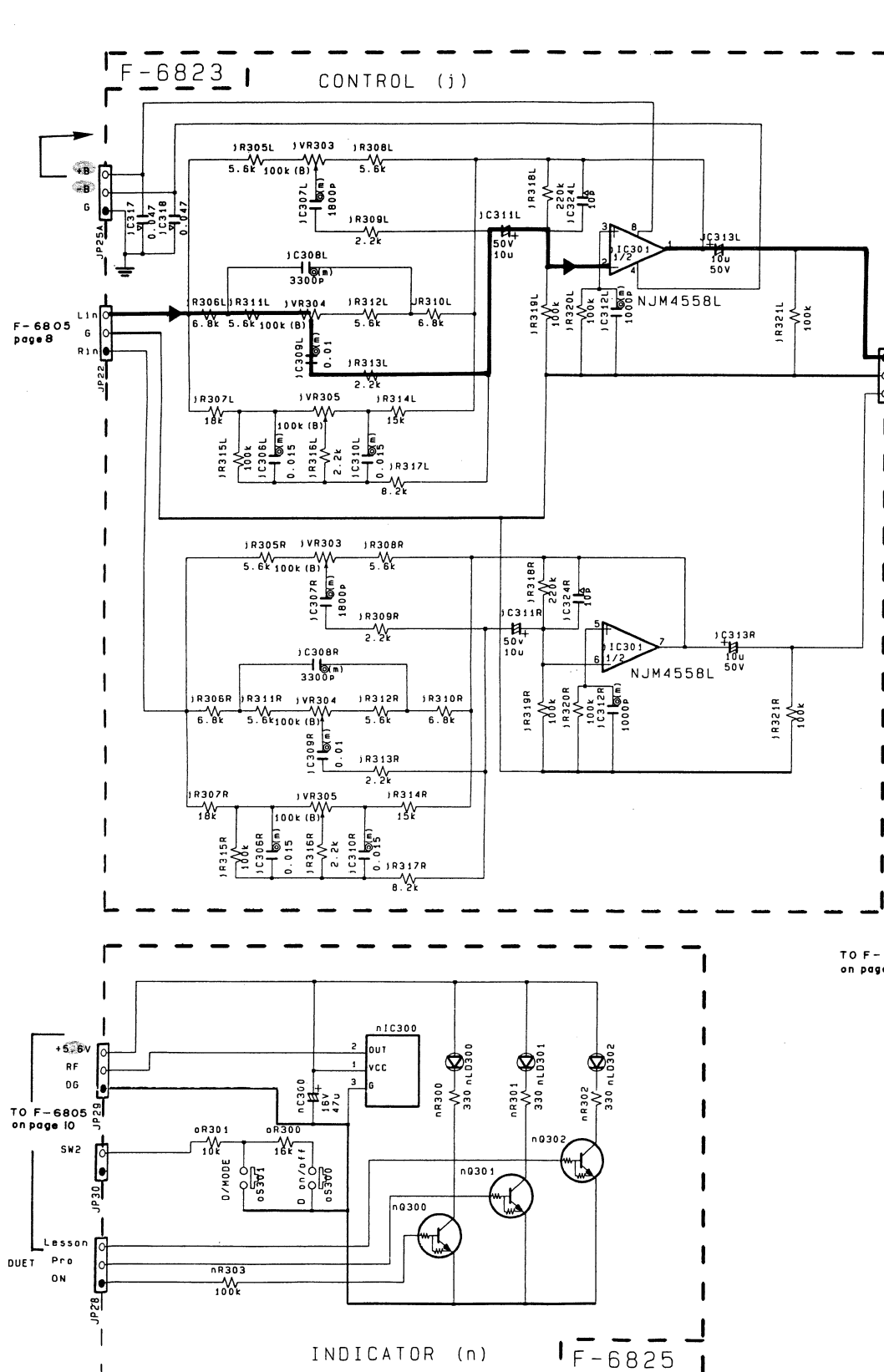


## 6-2. Power Amp. & Power Supply Section

- Design and specifications subject to change without notice for improvement.
- La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



# 6-3. Control Section



jDZ300 MTZJ4.7A  
nQ300-nQ302 DTC114ES RN1202  
nLD300 SEL3210S  
nLD301, 302 SEL3910A  
nIC300 GP1U56X  
jIC300, 301 NJM4558L M5218AL  
jIC302 LB1641

• Design and specifications subject to change without notice for improvement.  
• La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
• Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

## SYMBOL OF FUNCTION

- (j) CONTROL
- (k) POWER AMP
- (l) PROTECTOR
- (m) POWER SUPPLY
- (o) SELECTOR
- (p) FIXED PARTS

## SYMBOL

- △ Ceramic
- △ Barrier Layer Capacitor
- B.P Bi-Polar Electrolytic
- Mylar
- Non-Inflammable Resistor
- Cement Resistor
- Fusing Resistor

is Safety part.

Use only replacement parts recommended by manufacturer.

## RESISTORS

Are in ohms .1/6Watts,±5%Tolerance  
Unless Otherwise Noted k:kilo Ohms

## CAPACITORS

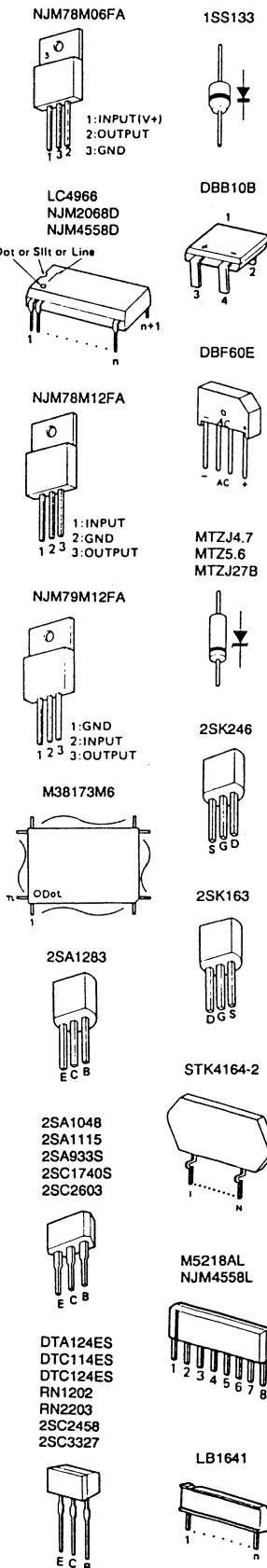
Are in uF,Unless Otherwise Noted  
p:pF

## Electrolytic Capacitor

Capacitance (uF) / Voltage (V)

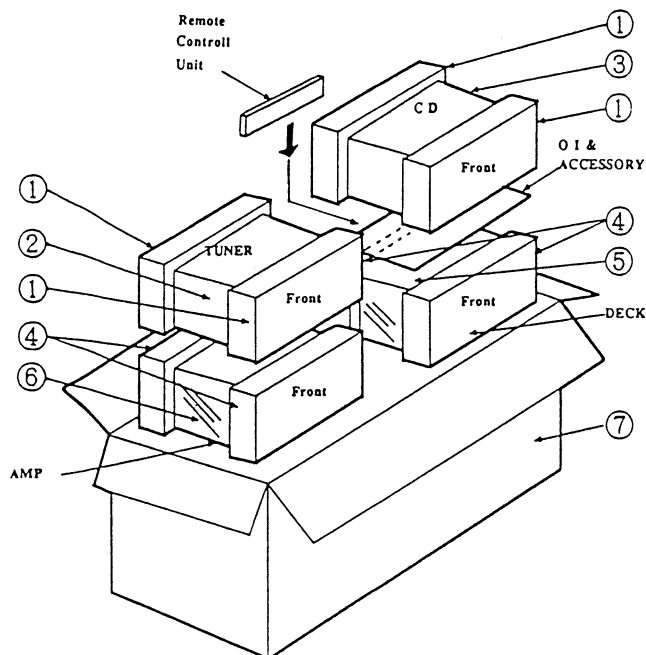
Each D.C Voltage shows the nominal value in volts at no input signal.

Signal Line





## 7. PACKING LIST & ACCESSORY LIST



### Accessory List

Parts No	Stock No	Description
	49746400	Remote Controller, RS-G7 (MC-X750/L)
	49631200	AM Loop Antenna
	07563000	Antenna Holder<SS,EU,IPT>
	46051700	FM Antenna
	-----	Dry Battery, SUM-3
	19078900	Operating Instructions (MC-X750)
	19082100	Operating Instructions (MC-X750L)
	49335000	Antenna Matching Transformer (MC-X750L)

### Packing List

Parts No	Stock No	Description
1	05098410	Styrofoam Packing, pair (Tuner/ CD)
2	27867300	Vinyl Bag(Tuner)
3	27867400	Vinyl Bag(CD)
4	05095900	Styrofoam Packing, pair (Deck/AMP)
5	27594000	Vinyl Bag(Deck)
6	27343800	Vinyl Bag(AMP)
7	05153800	Carton Case(MC-X750 Black)
	05158100	Carton Case(MC-X750 Gold)
	05159300	Carton Case(MC-X750L Black)
	05159400	Carton Case(MC-X750L Gold)

**SANSUI**

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